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Nicholas J. Caunter

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EXAMINER

CRAWFORD, GENE O

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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte NICHOLAS J. CAUNTER

Appeal 2008-006281
Application 10/771,994
Technology Center 3600

Decided: November 19, 2009

Before WILLIAM F. PATE, III, MICHAEL W. O'NEILL, and STEFAN
STAICOVICI, *Administrative Patent Judges*.

O'NEILL, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

Nicholas J. Caunter (Appellant) seeks our review under 35 U.S.C.
§ 134 of the final rejection of claims 1-3, 5-9, and 11-16. Appellant

canceled claim 4. The Examiner objected to claim 10. We have jurisdiction under 35 U.S.C. § 6(b) (2002).

The Invention

The claimed invention is to a device for removing folded signatures from a saddle-back conveyor.

Claim 1, reproduced below, is illustrative of the subject matter on appeal.

1. A device for removing folded signatures from a saddle-back conveyor comprising:
 - a rotating arm rotating a full rotation;
 - a first gripper mounted on the moving arm; and
 - an electromechanical actuator connected to the first gripper for opening and closing the first gripper, the electromechanical actuator being mounted on the moving arm.

The Prior Art

The Examiner relies upon the following as evidence of unpatentability:

Houseman	US 4,852,722	Aug. 1, 1989
Müller	EP 0 771 675 A1	May 7, 1997
Emigh	US 5,954,323	Sep. 21, 1999

The Rejections

The following Examiner's rejections are before us for review:

Claims 1-3, 7-9, 11-13, and 16 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Emigh.

Claims 14 and 15 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Houseman.

Claims 1-3, 5-9, and 11-16 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Müller in view of Emigh.¹

SUMMARY OF DECISION

We AFFIRM-IN-PART.

OPINION

Anticipation based on Emigh

The Examiner's position that Emigh's reciprocating arm is a rotating arm rotating a full rotation contorts the ordinary and customary meaning of "full rotation" as understood by a person having ordinary skill in the art. Appellant's contention is that a person having ordinary skill in the art would understand, when reading the claim in light of the Specification, that "full rotation" of the rotating arm means a 360° rotation whether that rotation is in one direction, i.e., rotational movement, or two directions, i.e., reciprocating movement (clockwise and counterclockwise movement combined). An ordinary and customary meaning of the term "full" is "containing as much..as is possible or normal." MERRIAM WEBSTER'S COLLEGIATE DICTIONARY (10th Ed. 1997). Hence, we agree with Appellants that a "full rotation" means a 360 degree rotation.

The Examiner's finding that Emigh's arm reciprocates is correct. However, Emigh's reciprocation is not a reciprocating movement that rotates a full rotation, i.e., a 360° rotation clockwise and then

¹ Claims 5 and 6 depend from canceled claim 4. For expediency in resolving this appeal we are considering these claims depend from claim 1. Further prosecution before the Examiner should address the dependency of claims 5 and 6.

counterclockwise or vice versa. Therefore, the claimed arm's full rotation is not fully met by the reciprocating arm described in Emigh. In view of the foregoing, the Examiner's rejection of claims 1-3, 7-9, 11-13, and 16 as anticipated by Emigh cannot be sustained.

Anticipation based on Houseman

As Appellant has contended, the Examiner erred in positing that the claimed invention in claim 14 fails to positively recite a saddleback conveyor as part of the claimed invention. Claim 14 is drawn to a process for removing signatures from a saddle-back conveyor that includes a step of "reciprocating or rotating an arm to move a gripper to remove signatures from a saddle-back conveyor" The claim recites the process is for use with a saddle-back conveyor and a structural feature, i.e., the arm, removes objects, i.e., signatures, from a saddle-back conveyor. As such, any anticipatory reference either has to explicitly or inherently perform a process on a saddle-back conveyor and have a structural feature that removes signatures from a saddle-back conveyor. Houseman neither performs a process on a saddle-back conveyor nor has a structural feature that removes signatures from a saddle-back conveyor. Therefore, Houseman does not anticipate the process of claims 14 and 15. In view of the foregoing, the Examiner's rejection of claims 14 and 15 as anticipated by Houseman cannot be sustained.

Obviousness based on Müller and Emigh

Appellant contends that Emigh's actuator is not an electromechanical actuator and an artisan would not use Emigh's actuator in the saddle-back conveyor of Müller because the air lines 32 of Emigh would tangle into the arm of Müller and thus not work with the fully rotating arm of Müller. The

Examiner responded that Emigh is an electromechanical actuator and the test for obviousness does not require features of the secondary reference to be bodily incorporated into the primary reference.

Appellant does not separately argue claims 5, 6, 7, 13, 15, or 16. Claims 5, 6, 7, and 16 will stand or fall with claim 1. Claim 13 will stand or fall with claim 11. Claim 15 will stand or fall with claim 14. Br. 7-10.

Appellant appears not to contest that Müller describes a device for removing signatures from a saddle-back conveyor and that the device has a fully rotating arm that rotates either with a rotational movement or reciprocating movement or that a set of gears rotate the arm. Hence, Appellant appears not to contest the scope and content of Müller and what the Examiner has used in Müller to reach the conclusion that the claims are obvious. Appellant appears not to contest that Emigh's actuator is a pneumatic actuator that is controlled by a solenoid valve that is not mounted on the moving arm. Appellant's contentions focus on: (1) the Examiner's finding that Emigh is an electromechanical actuator and (2) that an artisan would not replace Müller's gear set with Emigh's actuator because the lines to actuate Emigh's actuator would tangle in Müller's arm. Br. 7, 8.

The combination of familiar elements according to known methods is likely to be obvious when it does no more than yield predictable results. *KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398, 416 (2007). A prima facie conclusion of obviousness may be supported by a showing that the claims are directed to a process, machine, manufacture, or composition of matter already known in the prior art that is altered by the mere substitution of one element for another known in the field, as long as such modification yields a

predictable result. *See id.* (citing *United States v. Adams*, 383 U.S. 39, 40).

The Supreme Court further stated that:

[I]f a technique has been used to improve one device, and a person of ordinary skill in the art would recognize that it would improve similar devices in the same way, using the technique is obvious unless its actual application is beyond his or her skill. *KSR*, 550 U.S. at 417.

Thus, when considering obviousness of a combination of known elements, the operative question is “whether the improvement is more than the predictable use of prior-art elements according to their established functions.” *Id.*

Appellant’s contention against Emigh

We disagree with Appellant’s contention that Emigh’s pneumatic actuator does not meet the claimed electromechanical actuator when this limitation is read in light of the Specification. The Specification discloses the electromechanical actuator “preferably includes a pneumatic cylinder.” Spec. 3, para. [0011]; 6, paras.[0028] and [0030]. The cylinder is controlled with a solenoid control valve. Spec. 3, para. [0012]; 6, para. [0030]; 7, para. [0031]. Therefore, the broadest reasonable interpretation of an “electromechanical actuator,” when read in light of the Specification, is a solenoid controlled pneumatic cylinder.

Emigh describes that arm 17 is controlled by a pneumatic actuator 28 that has lines 32 connected to a solenoid valve 33. Emigh, col. 3, ll. 54-67 and Figures 4 and 5B. Therefore, Emigh describes a solenoid controlled pneumatic cylinder. Accordingly, giving the limitation of the “electromechanical actuator” its broadest reasonable interpretation when

read in light of the Specification, Emigh's solenoid controlled pneumatic cylinder meets the limitation of the "electromechanical actuator."

Appellant's contention against replacing actuators

Appellant does not appear to contest the scope and content of Müller. Appellant's contentions focus on the assertion that a person having ordinary skill in the art would not substitute Emigh's actuator for the mechanical actuator described in Müller because the air lines of Emigh's actuator would get tangled in Müller's arm. *See* Br. 8 (for claim 1), 9 (for claim 11), and 10 (for claim 14).

A *prima facie* conclusion of obviousness may be supported by a showing that the claims are directed to a process, machine, manufacture, or composition of matter already known in the prior art that is altered by the mere substitution of one element for another known in the field, and such modification yields a predictable result. *See KSR Int'l Co. v. Teleflex, Inc.*, 550 U.S. 398, 416 (citing *United States v. Adams*, 383 U.S. 39, 40 (1966)). "[T]he simple substitution of one known element for another" or "the mere application of a known technique to a piece of prior art ready for the improvement" generally will be obvious unless the substitution or the application of the known technique would have been beyond the level of ordinary skill in the art; or the results of the substitution or the application of the known technique would not have been predictable by one of ordinary skill in the art. *KSR*, 550 U.S. at 416-417.

We agree with the Examiner that a person of ordinary skill in the art would have been prompted to replace the Müller actuator with the Emigh actuator because both references teach moving the arm with an actuator, and thus it is no more than "the simple substitution of one known element for

another or the mere application of a known technique to a piece of prior art ready for the improvement.” *KSR*, 550 U.S. at 417. Specifically, this would involve merely the substitution of one type of actuator with another known type of actuator. A person of ordinary skill in the art would readily appreciate that the actuator taught by Emigh, if substituted for the actuator of Mueller, would provide an actuation of the rotating arm in much the same manner as the actuator in Müller’s system. Hence, the substitution appears to be the product not of innovation but of ordinary skill and common sense. Although we appreciate Appellant’s argument that the modification of Müller in light of Emigh might cause entanglement of the air lines as Emigh’s actuator is shown, we note that “[a] person of ordinary skill is also a person of ordinary creativity, not an automaton.” *KSR*, 550 U.S. at 421. As such, a person having ordinary skill in the art would readily supply appropriate fittings and minor modifications that would prevent such entanglement from occurring. Moreover, the Appellant does not provide any evidence to show that modification of Müller to provide the actuator of Emigh would have been beyond the technical grasp of a person of ordinary skill in the art. We thus conclude that the substitution would have been obvious to a person of ordinary skill in the art at the time of Appellant’s invention. Further responding to Appellant’s entanglement allegation, “it is not necessary that the inventions of the references be physically combinable to render obvious the invention under review.” *In re Sneed*, 710 F.2d 1544, 1550 (Fed. Cir. 1983). The relevant inquiry is whether the claimed subject matter would have been obvious to those of ordinary skill in the art in light of the *combined teachings* of those references. See *In re Keller*, 642 F.2d 413, 425 (CCPA 1981). It should be noted that “[c]ombining the *teachings*

of references does not involve an ability to combine their specific structures.” *In re Nievelt*, 482 F.2d 965, 968 (CCPA 1973). For the above reasons, Appellant has failed to demonstrate that the Examiner erred in determining that the combined teachings of Müller and Emigh would have prompted a person of ordinary skill in the art to replace the mechanical actuator of Müller with the electromechanical actuator of Emigh.

In view of the foregoing, Appellant has not demonstrated that the Examiner erred in concluding claims 1, 11, and 14 are rendered obvious based on Müller and Emigh. Claims 5, 6, 7, and 16 fall with claim 1 because they were not argued separately. Claim 13 falls with claim 11 and claim 15 falls with claim 14 because they were not argued separately. Accordingly, we will sustain the Examiner’s rejection of claims 1, 5, 6, 7, 11, 13, 14, 15, and 16.

While Appellant argues claims 2, 8, and 9 separately, Appellant does not advance any arguments for these claims beyond what is argued for claim 1, namely, Emigh has no electromechanical actuator, and thus the limitations of claim 1 cannot be met. Br. 8. We have addressed this argument *supra* and concluded that it did not demonstrate error in the Examiner’s decision to reject claim 1. Similarly, this argument fails to demonstrate error in the Examiner’s rejection of claims 2, 8, and 9. Thus, we will sustain the Examiner’s rejection of claims 2, 8, and 9.

However, Appellant’s argument that Emigh does not show a slip contact as claimed in claims 3 and 12 has merit. The examiner fails to address the slip contact limitation of claims 3 and 12. Therefore, we are constrained not to sustain the Examiner’s rejection of claims 3 and 12

because the Examiner has failed to articulate any reason why Müller and Emigh render obvious the slip contact as claimed in claims 3 and 12.

CONCLUSIONS

Appellant has demonstrated error in the Examiner's rejection of claims 1-3, 7-9, 11-13, and 16 under 35 U.S.C. § 102(b) as being anticipated by Emigh.

Appellant has demonstrated error in the Examiner's rejection of claims 14 and 15 under 35 U.S.C. § 102(b) as being anticipated by Houseman.

Appellant has not demonstrated error in the Examiner's rejection of claims 1, 2, 5-9, 11, 13, 14, 15, and 16 under 35 U.S.C. § 103(a) as being unpatentable over Müller in view of Emigh.

Appellant has demonstrated error in the Examiner's rejection of claims 3 and 12 under 35 U.S.C. § 103(a) as being unpatentable over Müller in view of Emigh.

DECISION

The Examiner's decision to reject claims 1-3, 7-9, 11-13, and 16 under 35 U.S.C. § 102(b) as being anticipated by Emigh is reversed.

The Examiner's decision to reject claims 14 and 15 under 35 U.S.C. § 102(b) as being anticipated by Houseman is reversed.

The Examiner's decision to reject claims 1, 2, 5-9, 11, 13, 14, 15, and 16 under 35 U.S.C. § 103(a) as being unpatentable over Müller in view of Emigh is affirmed

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The Examiner's decision to reject claims 3 and 12 under 35 U.S.C. § 103(a) as being unpatentable over Müller in view of Emigh is reversed.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a). *See* 37 C.F.R. § 1.136(a)(1)(iv) (2007).

AFFIRMED-IN-PART

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